

Induction of defense related proteins in okra by the mycoparasitic fungi *Ampelomyces* against *Erysiphe cichoracearum*

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ABSTRACT

Powdery mildew caused by *Erysiphe cichoracearum* is a destructive disease worldwide. With increasing awareness of possible deleterious effects of fungicides on the ecosystem, biological control now appears to be a promising strategy for managing diseases in a range of crops. The most explored agents for biocontrol of powdery mildew in okra is the mycoparasite *Ampelomyces quisqualis*. In this study, three effective isolates of biocontrol agent *Ampelomyces*; TNAU-AQ101, TNAU-AQ103 and TNAU-AQ109 were evaluated for the induction of systemic resistance in okra against *Erysiphe cichoracearum* in comparison with fungicide Dinocap. The activity of defense enzymes viz., peroxidase, polyphenol oxidase and β -1, 3-glucanase were found to be significantly higher in powdery mildew inoculated okra plants treated with talc formulation of TNAU-AQ101 at 5g l⁻¹ two sprays when compared to healthy and inoculated control. Reduction in the incidence of powdery mildew was positively linked to increase of defense enzymes activity in okra treated with talc formulation of TNAU-AQ101 at 5g l⁻¹ two sprays. The results reveal that application of *Ampelomyces* have a practical significance on the management of powdery mildew of okra.

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